

RESPONSE TO OFFICE ACTION
Old Atty. Docket No.: 067470.0159
New Atty. Docket No. P0808

Serial No.: 10/692,641
Filed: Oct. 24, 2003

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Amendments

IN THE CLAIMS:

Please amend the Claims as follows:

1. (Amended) An apparatus, comprising:

an information storage medium having an information storage surface;

structure which includes a head and can effect a transfer of information with respect to said surface, said structure being operable to move the head through effect relative movement of said head and said surface, ~~said relative movement~~ including first and second zones which are mutually exclusive, said structure being operable to move effect relative movement of said head and ~~said surface~~ within said first zone while maintaining said head adjacent said surface and using said head to effect at least one of reading information from and writing information to said surface, and wherein said head is spaced from said surface when in said second zone; and

a head cleaning section which includes a cleaning part engageable with said head when said head is in said second zone, said structure being operable to effect relative movement of said head and said cleaning part while said head and said cleaning part are engaged, in a manner which includes a component of movement representative of an applied force subject to a damping influence.

2. (Original) An apparatus according to Claim 1, wherein said applied force includes a harmonic oscillation and said damping influence includes an overdamping of said harmonic oscillation.

3. (Original) An apparatus according to Claim 1,

wherein said applied force and said damping influence are each effective with an orientation approximately parallel to a predetermined direction; and

wherein said relative movement of said head and said cleaning part while said head and said cleaning part are engaged includes a further component of movement effective with an orientation approximately parallel to a further direction which is transverse to said predetermined direction.

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4. (Original) An apparatus according to Claim 3, wherein one of said components of movement involves a reciprocating motion and the other thereof involves progressive motion in one direction during said reciprocating motion.

5. (Original) An apparatus according to Claim 3, wherein said further component of movement includes a reciprocating motion of said head relative to said cleaning part.

6. (Original) An apparatus according to Claim 3, wherein said applied force includes a harmonic oscillation, and said damping influence includes an overdamping of said harmonic oscillation.

7. (Original) An apparatus according to Claim 1, wherein said head cleaning section includes a first portion which can apply said applied force to said cleaning part in a predetermined direction, and a second portion which exerts said damping influence on said cleaning part approximately parallel to said predetermined direction.

8. (Original) An apparatus according to Claim 7, wherein said first portion includes a resilient part which yieldably resists movement of said cleaning part away from a predetermined position in a direction approximately parallel to said predetermined direction.

9. (Original) An apparatus according to Claim 8,
wherein said resilient part is a flexible part having said cleaning part supported thereon;
wherein said second portion includes a damping part which is physically coupled to said flexible part and damps flexing of said flexible part;
wherein said structure includes a movably supported member which has said head supported thereon;
wherein said structure is configured to effect movement said member so that said head moves within said second zone from a first position to a second position and then back to said first position; and
wherein in response to movement of said head by said member from said first position to said second position, said cleaning part is moved away from said predetermined position through flexing of said flexible part, and said cleaning part and said flexible part are free of influence from said head and said member as said head returns from said second position to said first position.

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10. (Original) An apparatus according to Claim 9,

wherein said head cleaning section includes an element mounted on said flexible part;

wherein as said member moves said head from said first position to said second position said member engages said element and moves said element in a manner that flexes said flexible part and moves said cleaning part away from said predetermined position; and

wherein as said member moves said head from said second position to said first position said member is free of engagement with said element.

11. (Original) An apparatus according to Claim 9, wherein said movement of said head from said second position to said first position includes, at a location between said first and second positions, a reciprocal motion of said head in directions approximately parallel to a direction of movement thereof between said first and second positions.

12. (Original) An apparatus according to Claim 8,

wherein said head cleaning section includes a pivotally supported lever having said cleaning part thereon;

wherein said resilient part is a spring which yieldably urges said lever to pivot in a predetermined direction;

wherein said second portion includes a damping part which is cooperable with said lever for yieldably resisting pivotal movement thereof;

wherein said structure includes a movably supported member which has said head supported thereon;

wherein said structure is configured to effect movement said member so that said head moves within said second zone from a first position to a second position and then back to said first position; and

wherein in response to movement of said head by said member from said first position to said second position, said cleaning part is moved away from said predetermined position through pivotal movement of said lever against the urging of said spring, and said cleaning part and said spring are free of influence from said head and said member as said head returns from said second position to said first position.

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13. (Original) An apparatus according to Claim 12, wherein said second portion includes a damping part which cooperates with said lever and with a stationary part, and which has alternating layers of a polyester material and a pressure sensitive adhesive, said pressure sensitive adhesive yieldably resisting shear forces within said pressure sensitive adhesive so as to provide said damping influence.

14. (Original) An apparatus according to Claim 12,
wherein as said member moves said head from said first position to said second position said member engages said lever and pivots said lever against the urging of said spring; and
wherein as said member moves said head from said second position to said first position said member is free of engagement with said lever.

15. (Original) An apparatus according to Claim 12, wherein said movement of said head from said second position to said first position includes, at a location between said first and second positions, a reciprocal motion of said head in directions approximately parallel to a direction of movement thereof between said first and second positions.

16. (Original) An apparatus according to Claim 1, wherein said cleaning part has a textured surface, and said engagement of said head and said cleaning part involves engagement of said head with said textured surface.

17. (Original) An apparatus according to Claim 16, wherein said cleaning part has a portion which is made of sol-gel and which has said textured surface thereon.

18. (Original) An apparatus according to Claim 16, wherein said cleaning part has a portion which is made of an epoxy material and which has said textured surface thereon.

19. (Original) An apparatus according to Claim 1,
wherein said information storage medium includes a magnetic material which has said information storage surface thereon; and
wherein said head is a magnetic read/write head.

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20. (Amended) A method of operating an apparatus which includes an information storage medium having an information storage surface, structure which includes a head and can effect a transfer of information with respect to said surface, and a cleaning part, said method comprising:

~~moving effecting relative movement of said head through and said surface, said relative movement including first and second zones which are mutually exclusive, said head being spaced from said surface when in said second zone;~~

maintaining said head adjacent said surface and using said head to effect at least one of reading information from and writing information to said surface during relative movement of said head and said surface within said first zone;

causing said cleaning part to engage said head when said head is in said second zone while effecting relative movement of said head and said cleaning part in a manner which includes a component of movement representative of an applied force subject to a damping influence.

21. (Original) A method according to Claim 20, including:

configuring said applied force to include a harmonic oscillation; and

configuring said damping influence to include an overdamping of said harmonic oscillation.

22. (Original) A method according to Claim 20, including:

orienting said applied force and said damping influence to each be effective approximately parallel to a predetermined direction; and

causing said relative movement of said head and said cleaning part while said head and said cleaning part are engaged to include a further component of movement effective with an orientation approximately parallel to a further direction which is transverse to said predetermined direction.

23. (Original) A method according to Claim 22, including configuring one of said components of movement to involve a reciprocating motion, and configuring the other thereof to involve progressive motion in one direction during said reciprocating motion.

24. (Original) A method according to Claim 22, including configuring said further component of movement to include a reciprocating motion of said head relative to said cleaning part.

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25. (Original) A method according to Claim 22, including:
configuring said applied force to include a harmonic oscillation; and
configuring said damping influence to include an overdamping of said harmonic oscillation.

26. (Original) A method according to Claim 20, including configuring said cleaning part to have a portion which is made of sol-gel and which has thereon a textured surface, said engagement of said head and said cleaning part involving engagement of said head with said textured surface.

27. (Original) A method according to Claim 20, including configuring said cleaning part to have a portion which is made of an epoxy material and which has thereon a textured surface, said engagement of said head and said cleaning part involving engagement of said head with said textured surface.

28. (Original) A method according to Claim 20, including configuring said information storage medium to include a magnetic material which has said information storage surface thereon, said head being a magnetic read/write head.

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